

Copy.

Wilmington,

September 22, 1893.

Dear Dr. Sandberg,

I return Holzinger's list, the only specimens I have here to compare are the following. The others I presume were returned to you so that I cannot tell whether he or I is right in the cases when we disagree. But of these now mentioned I am well satisfied. 539 he calls "Spiraea betulifolia, Pall but in inflor, approaching S. Salisfolia," That is just the reason Greene made it his S. pyramidalis.

158 "Potentilla ~~Norvegica~~ica" - my specimen is as I named it, P. rivalis, Nutt. var. millegrana, Engelm.

745 "Allium attenuifolium, Kellogg" - my specimen is good A. cernuum-nodding flowers - my bulb from a rhizoma and all the rest.

355 "A. Stellatum, Nutt!" - The specimens here correspond exactly with specimens of A. serratum, Watson named by him.

I re-inclose his list.

I have had much pleasure in going over the present sending in which I already find some things of much interest although these determinations are only tentative. Here is the list so far.



220 *Rununculus* ~~as~~ *aquatilis*, L. var;

209 *R. multifidus*, Ph. var; *terrestris*, ~~long~~ <sup>Gray</sup>;

776 *R. Eschscholtzii*, Schlecht.

776<sup>a</sup> I can only make a form of the above in the absence of fruit.

152 *R. hispidus*, Mx. proparte

654 *Anemone*, *occidentalis*, Watson.

17 Apr. 94-1070-  
359 *Delphinium distichum*, Geyer. You have collected this before and I gave you the name of *D. simplex*, Dougl. This seems to be still a doubtful species and I take it the above name of Geyers is the more sure one.

563 *D. scopulorum* Gray - a doubtful form.

432 *Corydalis aurea*, Willd, var. *occidentalis*, Engelm.

142 *Cheiranthus Menziesii*, B & H.

92 *Arabis*, *Cusickii*, Wats.

275 *Arabis* -? probably of the genus but I am unable to place it and it may be new.

50 *A. spathulata*, Nutt?

202 *A. lyrata*, L? or near it.

426 *Vesicaria Douglasii*, Nutt.

17 *Physaria Geyeri*, Nutt?

271 *Sisymbrium linifolium*, Nutt.

190 *Thelypodium* - I have nothing to match it and it is wholly doubtful to me - it is near *T. laciniatum* but seems quite distinct.



- D. *T. laciniatum*, Endl. with purple calyces.
- 294 *Arenaria congesta*, Nutt. var. *subcongesta*, Wats.
- 296 *A. Franklinii*, Dougl.
- 346 *Tissa marina*, Britton.
- 227 *Talinum spinescens*, Torr. with larger leaves and flowers than usual.
- 89 *Montia fontana*, L.
- 546 *Calandrinia Tweedyi*, Gray!
- 204 *Claytonia parviflora*, Dougl.
- 15 *C. gypsophylloides*, Fisch & Meyer.
- 607 *Hypericum anagalloides*, Cham. & Schlecht.
- 430 *Sphaeralcea longisepala*, Torr. agrees in the main with my specimens of this rare plant but the sepals are shorter and the divisions of the leaves less acute than usual.
- 501 *Acer macrophyllum*, Pursh .

Other names will go to you as soon as I can look them up.

Sincerely yours,

[Signed] Wm. M. Canby.



Wilmington,

September 27, 1893.

Dear Dr. Sandberg:

I enclose another list which must be taken in some cases as preliminary. Some of the specimens, notably the *Lupinus*s are very difficult. This you will see by my notes. I shall probably have to revise somewhat hereafter.

Yours very truly,

[Signed] Wm. M. Canby.

465 *Lupinus* - may be a form of *L. ornatus*, Dougl. but am quite doubtful about it.

35 *L. ornatus*, Dougl.

306 *L. confertus*, Kellogg "flowers sessile," "bracts persistent."

B. *L.* flowers apparently yellow - I have never seen a form like this so densely white silky tomentose - racemes dense but short leaflets 5 - 8 shorter petioled and many the plant much branched,

otherwise it has the marks of *L. leucophyllus* and must be near it. I have seen no description to match it.

179 *L. leucophyllus*, Dougl.

155 *L. sericeus*, Pursh?

77 *L. Burkei*, Watson I suppose judging from the persistent



villos<sup>u</sup>~~es~~ tracts.

214 L. Wyethii, Watson I understand this pretty well now.

215 E. cannot place this at all now.

402 L. " " " " " "

305 L. agrees with L. leucophyllus, Dougl. better than with any other.

527 Trifolium longipes, Nutt.

421 T. microcephalum, Ph.

149 Astragalus Spaldingii, Gray.

312 A. sclerocarpus, Gray.

354 A. conjunctus, Wats.

196 A. Gibbsii, Kellogg.

163 A. stenophyllus, T. & G.

473 A. campestris, Gray.

132 A. lentiginosus, Dougl.

308 Vicia Americana, Muhl.

24 Lathyrus palustris, L? a peculiar form

655 Eriogynia pectinata, Nutt. (Spiraea, T & G.) (with this was a small specimen of Rubus pedatus, Smith)

712 Spiraea betulaefolia, Pall.

No label or  
num<sub>ber</sub> Rubus lasiococcus, Gray.

315 Potentilla gracilis, Dougl.



717 *Potentilla gelida*, C. A. Meyer?

320 *Rosa Fendleri*, Crepin.

544 *Crataegus rivularis*, Nuttall.

711 *Lepuropetalon spathulatum*, Ell.

657 *Saxifraga stellaria*, L.

567 *Mitella Breweri*, Gray.

699 *Ribes laxiflorum*, Pursh.

566 *R. Hudsonianum*, Richards.

728 *R. bracteosum*, Dougl.

442 *R. cereum*, Dougl.

645 *R. lacustre*, Poir.

150 *R. setosum*, Lindl.

93 *R. cereum*, Dougl.

C. *R. oxyacanthoides*, L.

555 *Sedum stenopetalum*, Pursh.

335 *Callitriche verna*, L.

159 *Gayophytum racemosum*, T. & G.

428 " "

159 (lr's) *G. ramosissimum*, T. & G. known from 159 by the short pods  
which are longer pedicelled.

279 *Oenothera albicaulis*, Nutt.

162 *OE. Nuttallii*, T. & G.



- 130 *Oenothera heterantha*, Nuttall?
- 441 *OE. Boothii*, Dougl. unusual form.
- 290 *OE. Andina*, Nutt.
- 162 (1r's) " " young state of it.
- 262 *OE. strigulosa*, T. & G.
- 160 *Mentzelia albicaulis*, Dougl.
- 367 *Symphoricarpos rotundifolius*, Gray.
- 479 *Kelloggia galioides*, Torr.
- 224 *Galium multiflorum*, Kellogg.
- 551 *Valeriana sylvatica*, Richardson.



Wilmington,

October 2, 1893.

Dear Dr. Sandberg:

Having now gone over the **balance** in one of the two bundles into which your package was divided I now send the result with the same reservation as before. I may be somewhat slower with the next bundle. I would be glad to have you criticize my determinations freely.

Yours sincerely,

[Signed] W. M. Canby.

408 & 491 *Brickellia oblongifolia*, Nuttall.

169 *Townsendia florifer*, Gray.

653 *Erigeron salsuginosus*, Gray.

724 " " smaller.

476 *E. macranthus*, Nutt.

233 *E. Chrysopsidis*, Gray.

445 *E. poliospermus*, Gray.

142 *E. peucephyllus*, Gray.

236 *E. concinnus*, T. & G.

255 *E. filifolius*, Nuttall a form.

195 *E. radicans*, Hook - as to the broad leaved specimen - the others may be different but I cannot place them now if they are.



254 & 458 *E. corymbosus*, Nutt.

A. *Antennaria Carpathica*, R.Br.

213 *A. dioica*, Gaertn.

51 *A. stenophylla*, Gray.

166 *Balsamorhiza deltoidea*, Nuttall.

299 *Layia glandulosa*, Hook & Arn.

375 *Hymenopappus filifolius*, Hook.

183 *Eriophyllum caespitosum*, Dougl. var: *leucophyllum*, Gray.

725 *Arnica alpina*, Olin.

247 *Tetradymia canescens*, DC.

626 *Cnicus edulis*, Gray.

313 *Crepis occidentalis*, Nutt. - by the curious hairs on the involum this approaches the var: *crinitus*, Gray.

232 *C. acuminata*, Nutt.

208 *C. runcinata*, T.&G.

526 *Hieracium cynoglossoides*, Arvet.

433 *Stephanomeria paniculata*, Nutt.

371 *Lygodesmia juncea*<sup>e</sup><sub>r</sub>, Don.

287 *Downingia pulchella*, Torrey.

741 *Vaccinium Myrtillus*, L. var: *microphyllum*, Hook.

68 *V. caespitosum*, Michx.

744 *V. myrtilloides*, Hook.

746 *V. ovalifolium*, Smith.



706 *Gaultheria ovatifolia*, Gray.

714 *Cassiope Mertensiana*, Doh.

668 *Bryanthus empetriformis*, Gray.

552 *Pyrola picta*, Smith.

631 *Dodecatheon Jeffreyi*, Moore, var: *laucifolium*, Gray as near  
as I can make it out.

545 *Douglasia nivalis*, Lindl. var: *dentata*, Gray.



Wilmington,

Oct. 16th, 1893.

Dear Dr. Sandberg:

I send the final list of your plants. They have been studied amid the interruptions and occupations of a busy life and as you see lack the leisurely application which goes for so much in these things.

I shall be glad to hear from you about the names whenever you wish to write.

They have been a very interesting lot and I am thankful to you for the opportunity. I will now take out all the doubtful ones and all those you wish returned and go over these again after while. Just now I have a big job on hand which will require three or more weeks to finish.

You will hear again from me afterwhile.

Very sincerely yours,

[Signed] Wm. M. Canby



- 260 *Krynitzkia pterocarya*, Gray.
- 304 *K. oxycarya*, Gray.
- 249 *K. Fendleri*, Gray.
- 121 *K.* too young for determination.
- 173 *K.* " " " "
- 168 *Lithospermum pilosum*, Nutt.
- 317 *Nicotiana attenuata*, Torrey.
- 659 *Spraguea umbellata*, Torr.
- 667 *Pentstemon Menziesii*, Hook. var: *Douglasii*, Gray
- 459 *P. Menziesii*, Hook. var: *Scouleri*, Gray.
- 185 *P. glaber*, Pursh.
- 376 *P. acuminatus*, Dougl.
- 549 *P. confertus*, Dougl. var: *caeruleo-purpureus*, Gray.
- 355 *P. Richardsonii*, Dougl.
- 115 *Mimulus Suksdorfii*, Gray.
- 357 *M. pilosus*, Nutt.
- 193 *Limosella aquatica*, L.
- 710 *Veronica alpina*, L.
- 80 *Castilleja pallida*, Kth - between type and var: *occidentalis*, Gray.
- 234 *Orthocarpus tenuifolius*, Bth?
- 143 *Orthocarpus tenuifolius*, Bth? but there is a lack of color in the bracts and all there divisions are acuminate pointed instead of blunt.
- 436 *Aphyllon Ludovicianum*, Gray.



- 456 *A. Californicum*, Gray?
244. *Audibertia incana*, Bth.
- 362       "       "       "
- 413 *Monardella odoratissima*, Bth. connecting with *M. villosa*, Bth.
- 353 *Lophanthus anisatus*, Bth - in the heads approaching *L. urticifolius*, Bth.
- 503 *Stachys ciliata*, Dougl.
- 241 *Monolepis pusilla*, Torr.
- 316 *Chenopodium leptophyllum*, Nutt.
- 377       "       "
- 257 *C. (Blitum) capitatum*, Wats? too young.
- 372 *Atriplex truncata*, Gray?
- 349 *A. Nuttallii*, Watson.
- 226 *Grayia polygaloides*, Hook & Arn.
- 410 *Sarcobatus vermiculatus*, Torr.
- 167 *Eriogonum thymoides*, Benth.
- 521 *E. umbellatum*, Torr.
- 319 *E. sphaerocephalum*, Dougl.
- 235 *E. ovalifolium*, Nutt. var: *proliferum*, Wats.
- 348 *E. dichotomum*, Dougl. - probably - on account of the loose habit and acute leaves - but the flowers are those of *ovalifolium*.
- 493 *E. dichotomum*, Dougl.
- 383 *E. microthecum*, Nutt.
- 424 *E. elatum*, Dougl.



- 380 *Oxytheca dendroides*, Nutt.
- 258 *Chorizanthé Watsoni*, T.& G.
- 326 *Comandra pallida*, A.DC.
- 609 *Alnus rubra*, Bong. see Bul. Cal. 2 p.80
- 647 *Habenaria gracilis*, Wats.
- 146 *Allium Geyeri*, Wats.
- 273 *A. acuminatum*, Fraser.
- 205 *A. stellatum*, Fraser.
- 533 *Lilium Columbianum*, Hanson.
- 646 *Streptopus amplexifolius*, DC.
- 404 *Juncus Lescurii*, Bolander.
- 360 *J. longistylis*, Torr.
- 675 *J. Drummondii*, Meyer.
- 679 *J. Mertensianus*, Meyer.
- 388 *J. tenuis*, Willd in part  
*J. Bolanderi*, Engelm in part.
- 358 *J. Bolanderi*, Engelm.
- 524 *Potamogeton natans*, L.
- 264 *Zannichellia palustris*, L.
- 266 *Scirpus Nevadensis*, Wats.
- 332 *S. pungens*, Vahl. small form
- 55 *S.* " " " " ?
- 333 *S. maritimus*, L.
- 324 *S. Olneyi*, Gray.



323 *Eleocharis palustris*, R.Br.

416 *E.* with 3 stigmas - no fruit and therefore wholly uncertain -  
scapes nodulose but the plant is very different from *E. nodulosa*,  
Schult.

81 *Carex filifolia*, Nutt.

767 *C. nigricans*, C.A.Meyer.

756 *C. Bonplandii*, Kunth.

188 *C. Douglasii*, Boott.

79 *C.* " "

321 *C. siccata*, Dewey.

508 *C. Deweyana*, Schweinitz.

773 *C. stipata*, Muhl. var?

148 *C. muricata*, L. var: *gracilis*, Boott.

636 *C.* near *Sitchensis*, Prescott but the perigynium is beak-  
toothed and the tracts are too short.

194 *C.* cannot place at all now.

674 *C. Mertensii*, Prescott.

707 *C. foetida*, All.

30 *C. Novae-Angliae*, Schw. var: *Rossii*, Baily.

322 *C. filiformis*, L. var: *latifolia*, Boeckler.

515 *C. vesicaria*, L.



Wilmington, Oct. 9th, 1893.

Dear Mr. Sandberg:

Your note of 5th inst. is at hand. I think in this case I had better look into one or two of these cases at once if not into all. 166 *Balsamorhiza deltoidea*, Nutt. *B. careyana* is very much like this and differs mainly in the canescently tomentose achenes and the persistent rays. I cannot well determine the latter point in the specimen here, although they do not look like those of *B. Careyana*; but the achenes are smooth and not at all like those of *B. Careyana*.

725. The single specimen sent is almost too young. It has but two pair of stem leaves and look likes a smooth form of *N. alpina*. But if not where do you put it? It is possible that it may be the *A. latifolia* of Gray; *A. Chammissonis*, Les verr - look it up and give me your views further. All these specimens are very variable.

552. *Pyrola picta*, Sm. This is also a very variable species of all that Dr. Gray includes in it (*P. dentata*) and to be considered as one species. Your plant is exactly like one from the Teton Range, Wyoming, which Professor Porter named *P. chlorantha*? adding - "calyx and tubes longer and more acute, leaves



-2-

less round and scape less angled"- the very points of *P. picta*.

It may be best to separate these sometime but the mere marking of the leaves would not be sufficient without other characters.

*Rubus lasiococcus* I named as it agrees with my specimens of this plant. It is a trailing vine - the specimen two feet or more long with small white flowers and leaves of this shape - the serrature somewhat sharper than as represented.

I may as well add determinations as far as ascertained:

- 105 *Polemonium pectinatum*, Greene.
- 660 *Phlox douglasii*, Hk.; var. *diffusa*, Gray.
- 443 *P. speciosa*, Ph.
- 274 *P. caespitosa*, Nutt.
- 78 *Gilia gracilis*, Hook.
- 350 *G. aristella*, Gray.
- 270 *G. capillaris*, Kellogg.
- 201 *G. linifolia*, Bth., var. *pharnaceoides*, Gray?
- 283 *G. pusilla*, Beth., var. *Californica*, Gray? or n.sp.
- 181 *G. pungens*, Bth.
- 261 *G. inconspicua*, Dougl.
- 246 *G. floccosa*, Gray.
- 301 *G. inconspicua*, Dougl.
- 259 *Conanthus aretioides*, Watson.
- 352 *Phacelia humilis*, Gray.



- 288 P. ramosissima, Dougl.  
306 P. Ivesiana, Torr.  
343 Coldenia Nuttallii, Hk.  
223 Pectocarya penicillata, A. DC.  
277 Echinospermum diffusum, Lehm.  
174 E. deflexum, Lehm., var. Americanum, Gray.  
176 E. Redowskii, Lehm, var: Americanum, Watson.  
373 Krynitskia leucophaea, Gray.  
440 K. glomerata, Gray.

I am always glad to have your strictures in the names.

Yours sincerely,

(Signed) Wm. M. Canby.



Nov. 1, 1893.

My dear Dr. Sandberg:--

I have been looking over your willows this morning and will proceed to give you my first impressions as to names &c- an informal "talky talky" report. By and by when I come to mount the specimens I shall want to give a few of them a more careful examination with the aid of those capital helpers a cup of hot water and low power microscope.

11a Carleton Minn. male and female S. discolor Muhl.

16a Thompson Minn. S. humilis Marsh.

17a Carleton, Minn. S. rostrata Rich. f. monstrosa.

37a Hennepin Co. S. lucida Muhl. Two forms which can not be precisely determined as to variety &c without the mature leaves.

48 & 24 S. petiolaris Sm. v. gracilis Anders.

12a I should without much hesitancy refer the male<sup>aments</sup> to S. petiolaris v. gracilis but the pistillate have a doubtful look, as if they showed a cross with S. cordata. Without the leaves it is impossible to feel perfectly sure, so I would advise you, for the present at least, to withhold these from distribution.

----- " -----  
A. Idaho. Hope. May. Alt. 3,400

S. flavescens Nutt. v. scouleriana Banatt.

111 E. Washington Park Lake. Alt. 2,3000

S. lasiandra <sup>Benth.</sup> var. lanceifolia Anders (sp) but can not



134. Sprague. S. longifolia Muhl.

12. Spokane. male and female S. rostrata Rich.

9. " S. flavescens Nutt. v. scouleriana.

29. " S. cordata Muhl. forma

197 Sprague. This I take to be S. lasiandra var. fendleriana

Anders. (sp) but can not feel quite sure without the mature leaves. As I have cited under this form as a synonym S. pentandra L. var. caudata Nutt. some botanist of the Agricultural Department, whose name I can not now recall as I write, has criticised my selection of Anderson's name, claiming that I should have written S. lasiandra var. caudata. In this I am inclined to think he is right, but I have no copy of Nuttall's Flora, do not own the work and am unable to go back and revise this particular the work done on the Willows of California more than ten years ago. I think however that I should advise you to write caudata Nutt. instead of fendleriana Anders. It is a puzzle, anyway, to decide what is best to do with the protean forms of this species. I should like right well to arrange them all under S. lucida, only that having done this much still better reasons would exist for carrying the whole group to the European S. pentandra, and by the time this was done the aggregation would be dropped as unwieldy and inconvenient.

72. Spokane. S. sitchensis Sanson.

720. Stevens Pass. A mountain form of the same species S. sitchensis showing retarded inflorescence.

757 & 721. male and female S. barclayi Anders. = S. conjuncta Bebb.



This species is found in the high mountains west of the Great Basin southward as far as the Sierra Nevada of California. S. cal-  
ifornia is probably only an extreme modification of the same species.

480. Peshastin. S. longifolia Muhl. A form with very long, slender aments. The same has been collected by Mr. Piper in western Washington and by Dr. Lyall in the mountains north of your locality.

In examining the willows which you send me from the Plain of the Columbia or the mountains on the north, I am struck with a much greater resemblance to the Flora of the Columbia river valley much farther down its course (say in Suksdorf's old collecting ground Klickitat Co.) than I had expected to find. The forms of S. las-  
iandra, S. sitchensis, cordata, longifolia, scouleriana &c. are such as I should not have been surprised to receive from the Columbia any where clear down to its mouth. Furthermore there is not found in the entire collection a single species characteristic of the Rocky Mountain Flora east of the Great Basin I shall be glad to learn from you if in the Flora as a whole this relationship is sustained.

Let me thank you for the ample specimens. I do so enjoy having enough of a thing to fill a sheet while I am about it, especially if the specimens are <sup>so</sup> judiciously selected as are all that come from your hand.

Yours very sincerely,

M.S. Bebb



Wilmington, Nov. 10th, 1893.

Dear Dr. Sandberg,

I have now gone over your second sending and below I give you a full list. Of a few I will make remarks here. The plants are unusually interesting.

\_\_\_\_\_ (no No.) Angelica Canby C.R. I believe I have examined this as well as I could and think that it agrees very well with the above in the original specimens. I hope Dr. Rose will confirm it.

810 Erigeron-- This is a complete puzzle and if not published somewhere where I cannot find it, I believe it to be new. It has the habit of E. origanum but with the aster-like heads of E. saluginosus. I wish you would quote this to Dr. Rose also.

587 Madia glomerata, Brit. var:- but it is the Amida gracilis, Nutt- and I think it is a very marked variety of M. glomerata if not entirely distinct. Mark the strict stems, the almost connate, opposite, spatulate leaves and it is uniformly 2 flowered. It was collected in 1880 in your region by Brandegee and Tweedy.

553 Senecio- This is intermediate between S. petraeus and S. werneriaefolius and connects with S. aureus var. Balsamitae. I suppose it had better be called a variety of the first named but it is gigantic for that.

550 Pentstemon Menziesii Hook var: perhaps a form of variety var: Douglasii. The flowers are very large and so are the leaves which



are rather thin and wholly entire.

575 Calochortus maweanus Leicht. var: This corresponds exactly with my specimen of the above named by S. Watson except that the inner face of the petals is scarcely hairy. It may have been published under a new name for it is far north of the usual range of the species but I cannot find it. It might be called var: nudum.

589 Is the same as Coll. Pringle, Mt. Shasta Aug. 23rd, 1881 called Carex scoparia Schk. var. fulva, Boott. Neither specimen is very fulvous however and they seem to me to be distinct from C. scoparia.

Is there any way I could try a specimen of the Calochortus? And if you ever have a chance again get me Veronica Cusickii, Balsamorhiza terebinthacea and Lupinus polyphyllus.

I will soon send your specimens back. I am going to Phila. today to look into those not yet re-examined.

Yours sincerely,

(Signed) Wm. M. Canby.



- 735 Delphinium pauciflorum, Nutt., var. depauperatum, Gray.
- 817 Silene douglasii, Hook.
- 601 Sagina linnaei, Presl. Large specimens.
- 547 Calandrinia leana, Porter. Large specimens.
- 742 Pachystima myrsinites, Raf.
- 523 Lupinus polyphyllus, Lindley.
- D Spiraea betulaeifolia, Pallas.
- 590 Prunus emarginatus, Walp.
- 704 Rubus leucodermis, Dougl.
- 750 Pyrus sambucifolia, C. & S.
- 815 Mitella trifida, Graham.
- 567 Mitella breweri, Gray.
- M. Heuchera glabra, Willd.
- 809 Sedum divergens, Wats.
- Hippurus montana, Ledeb.
- 145 Oenothera andina, Nutt.
- 528 Probably Gayophytum ramosissimum, T. & G. (But too young.)
- 519 Mentzelia dispersa, Wats.
- Angelica canbyi, Coult. & Rose.
- 782 Aplopappus brandegei, Gray. (From the original locality.)
- 703 Aster modestus, Lindl.
- 759 Aster cusickii, Gray. forma.
- 340 Aster foliaceus, Lindl. var. = "var: pubescens," Gray.
- 807 Aster adscendens, Lindl. coll. Suksdorf.



- 0 Veronica cusickii, Gray.
- 686 Eriogonum umbellatum, Torr.
- 813 Eriogonum compositum, Dougl. With lanceolate rather than cor-  
date leaves.
- 799 Polygonum minimum. Wats. Very fine specimens.
- 503 Alnus incana, Willd. var. virescens, Wats.
- 796 Chamaecyparis nutkaensis, Spach.
- 794 Listera cordata, R. Br.
- 575 Calochortus maweanus, Leicht. var. (nudum.)
- 740 Lilium columbianum, Hanson.
- 602 Juncus patens, Meyer.
- 579 )  
    )Juncus longistylus, Torrey.
- 822 )
- 708 )  
    )Carex echinata, Murr.
- 761 )
- 589 "Carex scoparia, Schk. var. fulva, Benth."
- 592 Carex retrorsa, Schw.
- 640 Carex utriculata, Boott.
- 577 Aspidium munitum, Kaulf. var. imbricans, D.C. Eaton.
- 812 Aspidium mohrioides, Bory.
- 790 Lycopodium selago, L.



- 803 Aster between Aster menziesii and Aster adscendens. Bracts  
of involucre more resembling the latter and general as-  
pect the former. I have nothing just like it.
- 810 Erigeron. n.sp?
- 765 Erigeron acris, L.
- 757 Antennaria alpina, Gaertn.
- 460 Balsamorhiza terebinthacea, Nutt.
- 537 Madia sativa, Mol. A large open form.
- 587 Madia glomerata, Hook. var: = Amida gracilis, Nutt.
- \_\_\_\_\_ Arnica chamissonis, Lessing.
- 553 Senecio petraeus, Klatt. var.?
- 784 Luina hypoleuca, Benth.
- 695 Cnicus edulis, Gray.
- 671 Hieracium scouleri, Hook.
- 835 Too young.- Troximon aurantiacum, Hook?
- 440 Too young.- Troximon glaucum, Nutt?
- 786 Vaccinium ovalifolium, Sm.
- 638 Vaccinium myrtilloides, Hook.
- 569 Chimaphila menziesii, Spreng.
- 500 Phacelia procera, Gray.
- 495 Cuscuta californica, Choisy.
- 550 Pentstemon menziesii, Hook. var.?
- 787 Pentstemon ovatus, Dougl.
- 549 Pentstemon attenuatus, Dougl. probably.



WM. M. CANBY, PRESIDENT.  
THOS. H. SAVERY, VICE PRESIDENT.  
W. J. ELLISON, SECY. AND TREAS.

Wilmington, Del., Apr. 15 1893

Dear Mr. Coville,

I have sent Sandberg a lot of notes on his & Leiber's collection partly of my own making up and partly in answer to his questions. I copy them for you or Rose, or whoever may have the job of looking over his specimens.

Please say to Rose that it is now arranged that my West. will not go to N.Y. before the last of January meet. - Yours truly, Wm. M. Canby

"*Spirea betulaeifolia* Pallas" - The white flowered one you sent is the true plant according to most authors; but Mr. Greene, "Pittoria 2 p. 219", says we do not have the Siberian species - consequently he calls it *S. lucida*, Drup. - then he copies away by saying "var: rosea" and describes this var: - now you 712 is called by Thomas Howell "*S. chamaedrifolia*" which is a Japanese and perhaps Siberian species which Pursh credits to "Canada and the N.W. coast" - my specimens from Japan may not be rightly named but they are not your 712 plant. So that I cannot now otherwise name it than to say that it is *S. betulaeifolia* Pallas var: rosea Hay and *S. lucida*, Drup. var rosea, Greene.






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234 I am now satisfied that this cannot belong to *Othocarpus tenuifolius* of which I have collected many specimens. I can find no description and it may be a n. sp. I think it is.

567 is not *Metella Breweri* at all! but *M. pentandra* Hook. With the stamens so manifestly opposite the petals I cannot see how I made the oversight.

But there is your "*M. trifida* Graham, Woods, Kootenai Co., Idaho, 1888". If I mistake not the stamens are opposite the sepals as they should be but the petals are this shape  or  instead of  as in true *M. trifida* and they are green in the former and white in *M. trifida*. See in Pittman 1 p. 32 describes an *M. ovalis* with petals like this but otherwise the description does not tally.

202 *Arabis*; which I doubtfully called *lyrata* but the leaves are not *lyrata*. A specimen from Alaska is called *A. lyrata* in Herb. Phila. Acad. The pods are not broad enough but, as so many of your specimens are large for the species, can this be a gigantic *A. spatulata* Nutt? Any way it puzzles me.

50 I called this *A. spatulata*, Nutt but I see it has



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toothed leaves and so may get to *A. furcata*, Nutt when it gets its growth. There are a lot of the western species of this genus which are very puzzling.

275- *Gen* is one of them. It somewhat resembles *A. Bolanderi* but differs in the flowers, more erect pods and in the stem leaves, which narrow to the base and are not auriculate. It also branches from the base which *A. Bolanderi* is said not to do. Can find no name for it.

190 *Thelypodium*. I can find neither specimen nor description to match this. As compared with *T. laciniatum* the petals are more spatulate and broader outside the claw, the spike more condensed, the plant larger, no purple tinge to the calyx which is of a different shape the leaves thicker and apparently nearly entire and the pods more erect and with a longer style. See a description of a *Thelypodium* in *Pittman* 1. p. 62 which however does not apply to your plant.

35- I am inclined to believe this to be *Lupinus lepidus*, Gray; and as well your 196 (1887) and your *L. leucophyllus*, *plains Montanai* by Idaho 1888 " 35 has the lower calyx lip entire, upper 2-parted, both ciliate.



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- 155 *L. sericeus*, *Ph. var?* Lower calyx lip sub-entire or 3 dentate, upper lip cleft, keel very ciliate banner hairy-linear subulate bristles between the calyx lips.
- 465 *L. ornatus*, *Dryf.* lower calyx lip entire - upper 2-3 crenate, keel ciliate
- 402 Have no name for it. In habit more like *L. ornatus* but the banner and keel are naked - lower calyx lip entire, upper 2 cleft.
- 215 Cannot place this either. Somewhat like *L. Myethii* but the banner & keel are naked - lower lip sub-entire - upper 2 cleft
- 214 *L. Myethii*, *Nutt.*
- 77 *L. Burkei*, *Nutt.*
- 179 *L. leucophyllus*, *Dryf.* I suppose in spite of the small flowers which are like those of *L. holosericeus*, *Nutt.* that however has not the spreading fulvous.
- 305 *L. leucophyllus*, *Dryf.* - *L. confertus* is under this number  
B. Perhaps a form of *L. leucophyllus* but not satisfactorily <sup>(also)</sup>
- 557 *Valeriana sylvatica* is all I can see in it.
- 195 I called this *Erigeron radiatus*, *Walt.* but this is unsatisfactory
- 476 *E. macranthus*, *Nutt.*
- 283 This is not *Gilia pusilla* var. *Californica*. The calyx is smaller the lobes broader & thinner - the flowers larger & more deeply cut and therefore more spreading. A very fine species perhaps new!



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358 + 338 Mr. Coville has my Junci and I cannot compare this. I can find no description to suit it. It is triandrous. Look out for a specimen of Juncus tenuis with it.

473 Carex stipata, var.? well quite as likely not.

595 Calochortus Mauleanus, Ledeb.: exactly like specimens so named by Watson but the petals not hairy inside.

553 I now believe to be Saururus L. var. brevis.



- 20 Poa pretensis, L. Most likely.
- 267 Atropis scabrella, Thurb.
- 87)  
 ) Poa tenuifolia, Burkl.  
 184)
- 282) ) A variable and  
 ) Atropis (Poa) Nevadensis )  
 207) ) puzzling species.
- 531 Atropis (Poa) Fendleriana (stend.) Poa californica and Poa  
andina.
- 403 Agrostis alba var. gigantea, Rehb.
- 369) Agrostis exarata, Trin. (Small plants)  
 )  
 370) " "
- 656) Agrostis aequivalvis, Trin. Small plants. A little doubt.  
 )  
 676) " " No doubt.
- 821 Festuca ovina var?
- 693 Festuca Howellii, Hackel.
- 482) Festuca ovina var. polyfolia, Vasey.  
 )  
 283) " " "
- 356 Festuca ovina var. Columbiana n.var. Same from Prof. E. R. Lake  
 of Pullman, Washington.
- 98 Festuca microstachya, Nutt
- 291 Festuca tenella, Willd.
- 504 Festuca subulata, Bong.
- 191 Bromus tectorum, L.
- 399 Bromus secalinus, L.
- 499 Bromus ciliatus, L.



- 450 Bromus breviaristatus, Thurb.
- 535 Deyeuxia neglecta, Kth. 2 sheets of this.
- 613 Deyeuxia canadensis, Beauv.
- 825 Deyeuxia sylvatica, var. Americana, Vasey.
- 325 Deyeuxia neglecta, Kth.
- 795 Deyeuxia canadensis, Beauv.
- 690 Deschampsia atropurpurea, Scheele.
- 582) Deschampsia elongata, Munro.  
 )
- 395) " "
- 823 Trisetum. (n. sp. most likely. I want to see all you have to  
 (be returned if you request it.
- 231 Stipa viridula, Trin.
- 269 Stipa occidentalis, Thurb.
- 240 Stipa comata, Trin.
- 580 Melica bulbosa, Geyer.
- 248 Spartina gracilis, Trin.
- 760 Danthonia intermedia, Vasey.
- 425 Panicum dichotomum, L.
- 439 Aristida purpurea, Nutt.
- 239 Agropyrum tenerum (?) I should like to know whether it was  
 the usual form where collected. If  
 much was seen.
- 437 Elymus condensatus triticoides.
- 393) Elymus Americanus, V. & S.  
 536)  
 396)



- 310) Agropyrum glaucum, R. & S.  
 466) " "  
 435) " "  
 331 Agropyrum tenerum, Vasey.  
 365 Agropyrum divergens, Nees.  
 583 " "  
 237 " "  
 594 Muhlenbergia glomerata. Small and simple spikes for the  
 species.  
 245 Hordeum jubatum, L.  
 463) Distichlis maritima, Raf.  
 )  
 251) " " very variable.  
 307 Sporobolus asperifolius, N. & M.  
 687 Trisetum subspicatum, Beauv.  
 734 Pleuropogon refractum, Benth.  
 507 Glyceria nervata, Trin.  
 604 Glyceria pauciflora, Presl.  
 280 Polypogon monspeliensis, Desf.

I am suddenly called to spend a week in Chicago. I mail answers to most numbers of your grasses. A few will receive further attention.

(Signed) W. J. Beal.

Oct. 28, '93.



The Shaw School of Botany.  
William Trelease,  
Professor in Charge.

(Sandberg)

- 263 Oenothera strigulosa.
- 28 Rumex hymenosepalus.
- 390 Probably Epilobium Hornemanni X alpinum, - of the general aspect of tall forms of the latter, and with white flowers, but rough seeds.
- 677 Epilobium Hornemanni, (with unusually large flowers, perhaps the result of hybridity, as to the Stein's Pass specimens.)
- 772 E. Hornemanni X? The same as Brandegees, 778, and Henderson, 2447, - the form noted on p. 107 of Revision.
- 731 E. luteum.
- 109 E. leptocarpum, va. Macounii.